

APPENDIX B: HAZARDOUS WASTE LANDFILL COVER DESIGN CONSIDERATIONS

Table of Contents

Paragraph	Page
B-1. General	
a. Intended use of document	B-1
b. Purpose and function of cover system	B-1
c. Alternative cover types	B-1
d. RCRA hazardous waste landfill covers	B-1
B-2. Predesign Investigations	
a. General.....	B-2
b. Field surveys and record searches.....	B-2
c. Geological investigations	B-3
d. Geotechnical laboratory tests.....	B-4
e. Chemical data requirements.....	B-5
B-3. Cover System Components	
a. General.....	B-6
b. Erosion control layer	B-7
c. Protective soil layer.....	B-8
d. Filter layer—geotextile	B-9
e. Filter layer—granular materials	B-11
f. Drainage layer.....	B-12
g. Drainage collection and removal system	B-16
h. Barrier layer—geomembrane	B-17
i. Barrier layer—clay.....	B-18
j. Barrier layer—geosynthetic clay liner	B-20
k. Cover penetrations	B-20
l. Gas collection and removal system.....	B-20
m. Random fill and regraded waste	B-23
n. Clearing and grubbing.....	B-24
B-4. Geotechnical Design	
a. Settlement	B-24
b. Stability analysis	B-26
c. Test fills.....	B-27
d. Borrow areas	B-29
e. Ground water monitoring.....	B-29
f. Cover grading requirements.....	B-30
g. Leachate control.....	B-30
h. Cover surface runoff and erosion control requirements.....	B-30

B-5. Civil Design

a. Site access routes	B-32
b. Staging areas and phasing requirements	B-32
c. Decontamination facility.....	B-32
d. Security fencing	B-33
e. Demolition	B-33

B-6. Health and Safety

a. General.....	B-33
b. Design criteria	B-33

B-7. Chemistry

a. General.....	B-33
b. Design criteria	B-34

B-8. Operation and Maintenance Requirements

a. General.....	B-34
b. Ground water.....	B-34
c. Leachate	B-34
d. Landfill Gas.....	B-34
e. Settlement	B-34
f. Slope stability.....	B-34
g. Landfill cover	B-35
h. Runoff controls	B-35
i. Other features	B-35
j. Inspections	B-35
k. Maintenance	B-35

B-9. Environmental and Regulatory ComplianceB-35

B-10. Potential List of DrawingsB-37

B-11. Potential List of SpecificationsB-37